

(12) Japanese Patent Publication (A)
(11) Publication number: 2001-156723
(43) Date of publication of application: 08.06.2001
(21) Application number: 11-336660
(22) Date of filing: 26.11.1999
(71) Applicant: NTT DOCOMO INC.
(72) Inventor: KINOSHITA SHUJI, YASUZAWA KAZUYA, MURATA MITSURU
(54) RADIO COMMUNICATION TERMINAL AND RADIO COMMUNICATION METHOD

What is claimed is:

1. A wireless communication terminal, comprising:
directionality use communication means for performing communication using directionality between one or more of wireless communication terminal;
wireless communication means for performing wireless communication between wireless communication terminals having a specific wireless communication ID;
switching means for switching the directionality use communication means and the wireless communication means; and
control means for, when the specific wireless communication ID is received by the directionality use communication means from the wireless communication terminal, controlling so as to perform wireless communication using the wireless communication ID by switching from the directionality use communication means to the wireless communication means by the switching means.
2. The wireless communication terminal according to claim 1, wherein
the wireless communication means transmits/receives at least one of an audio signal, a control signal and/or a data signal.

3. The wireless communication terminal according to claim 1 or claim 2, wherein

the directionality use communication means performs communication using directionality by employing at least one communication function of infrared communication, visible-light communication, and/or ultrasonic communication.

- The following is a partial translation of Japanese Laid-open Patent Publication No. 2001-156723

[0020] When connection elements (for example, infrared ray sensors or the like) for an infrared ray communication by communication terminals are faced to each other in order to identify a communication partner, the directivity utilizing communication unit 20 periodically transmits a signal that pursues external radio communication terminal information to external radio communication terminals existing in the region limited by the infrared rays, and lists external radio communication terminals which are connectable. When a control unit 1 instructs the directivity utilizing communication unit 20 to identify a communication partner (step S202), a terminal pursuing the connection is identified from the information of the listed external radio communication terminals and a connection request signal is output (step S204), and the connection is established via an infrared ray communication (steps S206 to S212). During these steps, in addition to the ID addresses for the infrared ray communication, the ID addresses for the radio communication are also exchanged at the same time.

- The following is a translation of Fig. 1 (図 1) of the patent application publication above.

1. Control unit
2. Switch unit
3. Directivity utilizing communication control unit
4. Directivity utilizing communication transmitter-receiver
5. Radio communication control unit
6. Radio transmitter-receiver
10. Radio communication terminal
20. Directivity utilizing communication unit
30. Radio communication unit

- The following is a translation of Fig. 2 (図 2) of the patent application publication above.

- 1 Terminal A
- 2 Terminal B
- 3 Control unit

- 4 Switch unit
- 5 Radio communication unit
- 6 Directivity utilizing communication unit
- 7 Directivity utilizing communication unit
- 8 Radio communication unit
- 9 Switch unit
- 10 Control unit
- 11 Infrared ray connection instruction
- 12 Infrared ray connection request signal
- 13 Infrared ray connection request report
- 14 Infrared ray connection response signal + Radio communication ID of terminal B
- 15 Infrared ray connection response instruction + Radio communication ID of terminal B
- 16 Infrared ray connection completion report + Radio communication ID of terminal B
- 17 Establish infrared ray transmission path
- 18 Infrared ray connection completion report
- 19 Transmission path switching instruction
- 20 Transmission path switching instruction
- 21 Transmission path switching completion report
- 22 Switch transmission path
- 23 Disconnect infrared ray transmission path
- 24 Switch transmission path
- 25 Transmission path switching completion report
- 26 Radio connection instruction + Report of radio communication ID of terminal B
- 27 Radio connection request signal (Utilize radio communication ID of terminal B)
- 28 Radio connection request report
- 29 Radio connection response signal
- 30 Radio connection response instruction
- 31 Radio connection completion report
- 32 Establish wireless transmission path

[illegible]

F ターム(参考) 5K002 AA05 FA03
5K033 BA08 BA14 CB01 CB06 DA17
DA20
5K067 AA34 BB04 BB21 DD17 EE02
EE32 EE37 KK01